

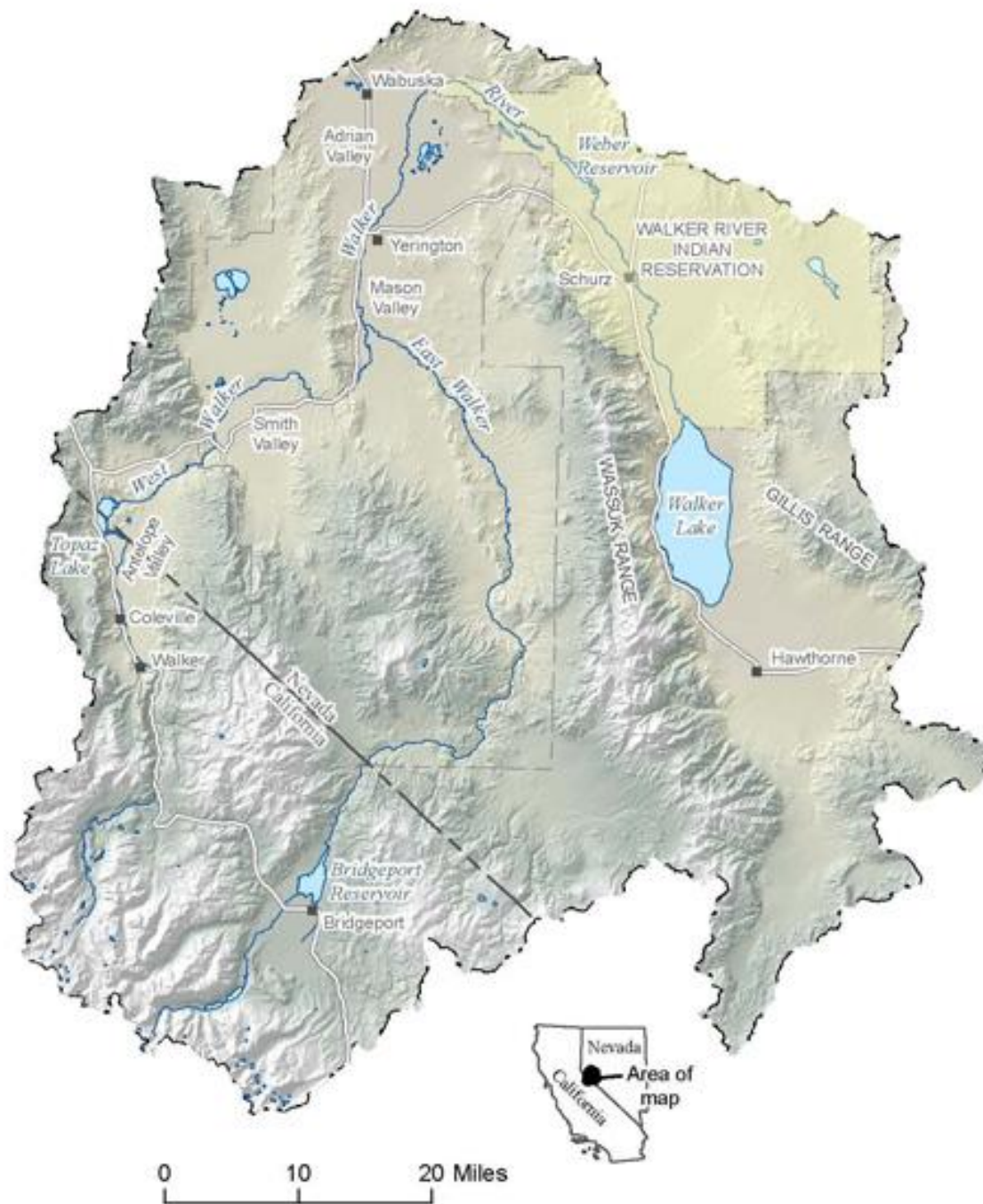
Division of
WATER RESOURCES

Walker River

Smith
& Yerington

January 22, 2015

DEPARTMENT OF
**CONSERVATION &
NATURAL RESOURCES**

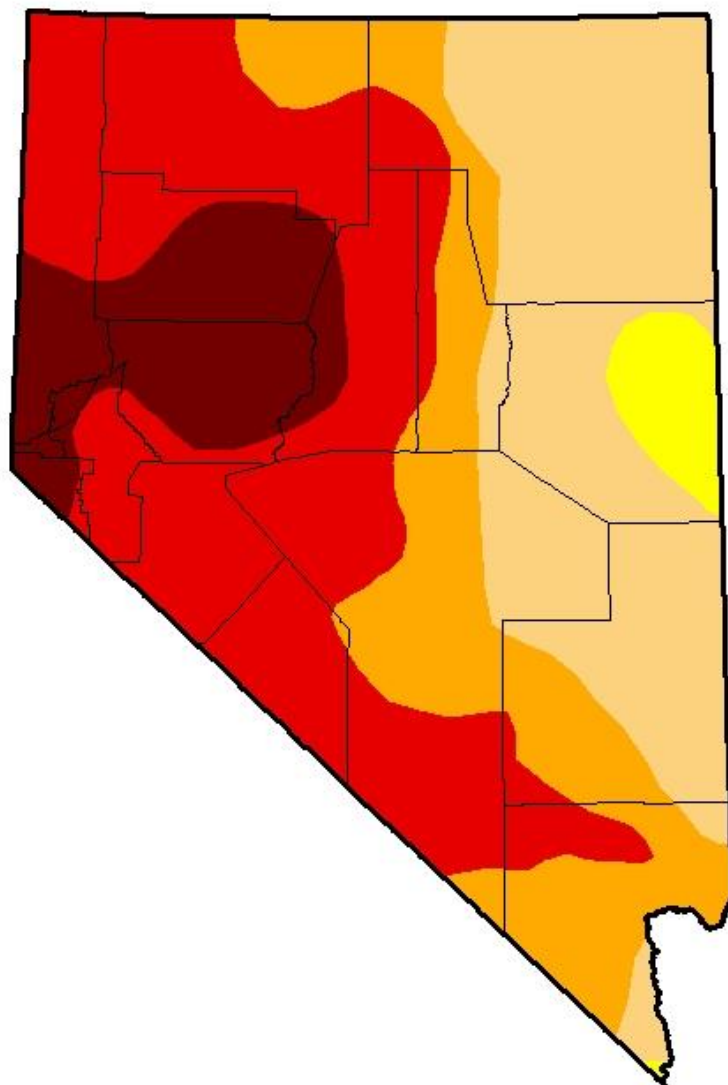


Why Are We Here?

- Entering 4th year of drought
- Unprecedented groundwater pumpage
- Unprecedented water level declines
- Reports of well failures
- Likelihood of basin-wide well failures
- State Engineer Actions
- Q & A

U.S. Drought Monitor

Nevada



January 13, 2015

(Released Thursday, Jan. 15, 2015)

Valid 7 a.m. EST

Drought Conditions (Percent Area)

| | None | D0-D4 | D1-D4 | D2-D4 | D3-D4 | D4 |
|--|------|--------|-------|-------|-------|-------|
| Current | 0.00 | 100.00 | 96.98 | 68.25 | 48.38 | 12.18 |
| Last Week <i>1/6/2015</i> | 0.00 | 100.00 | 96.98 | 68.25 | 48.38 | 11.89 |
| 3 Months Ago <i>10/14/2014</i> | 0.00 | 100.00 | 97.07 | 69.89 | 48.38 | 11.89 |
| Start of Calendar Year <i>12/30/2014</i> | 0.00 | 100.00 | 96.98 | 68.25 | 48.38 | 11.89 |
| Start of Water Year <i>9/30/2014</i> | 0.00 | 100.00 | 97.04 | 69.89 | 48.38 | 11.89 |
| One Year Ago <i>1/14/2014</i> | 0.00 | 100.00 | 96.80 | 80.30 | 38.17 | 5.37 |

Intensity:



The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:

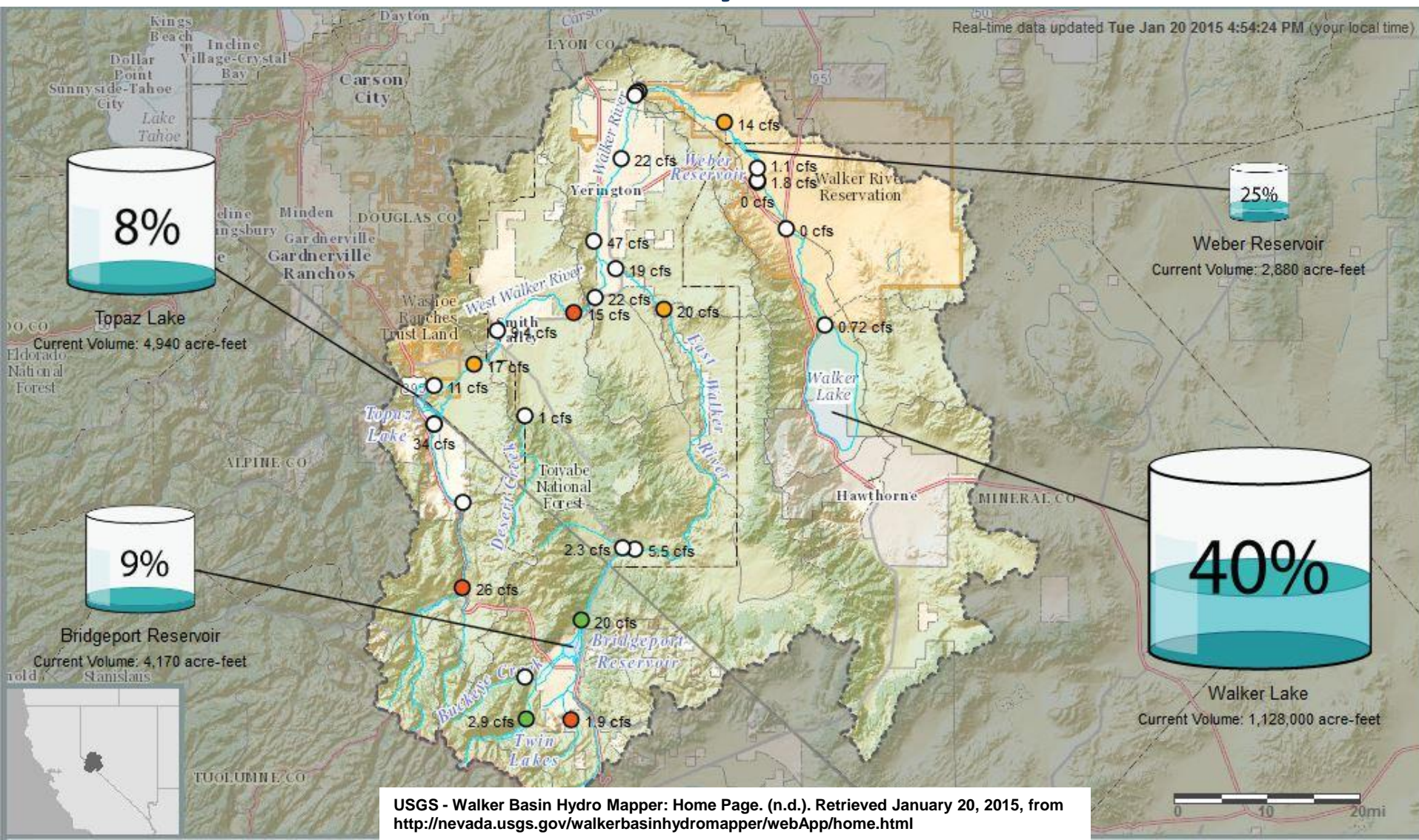
Richard Tinker

CPC/NOAA/NWS/NCEP



<http://droughtmonitor.unl.edu/>

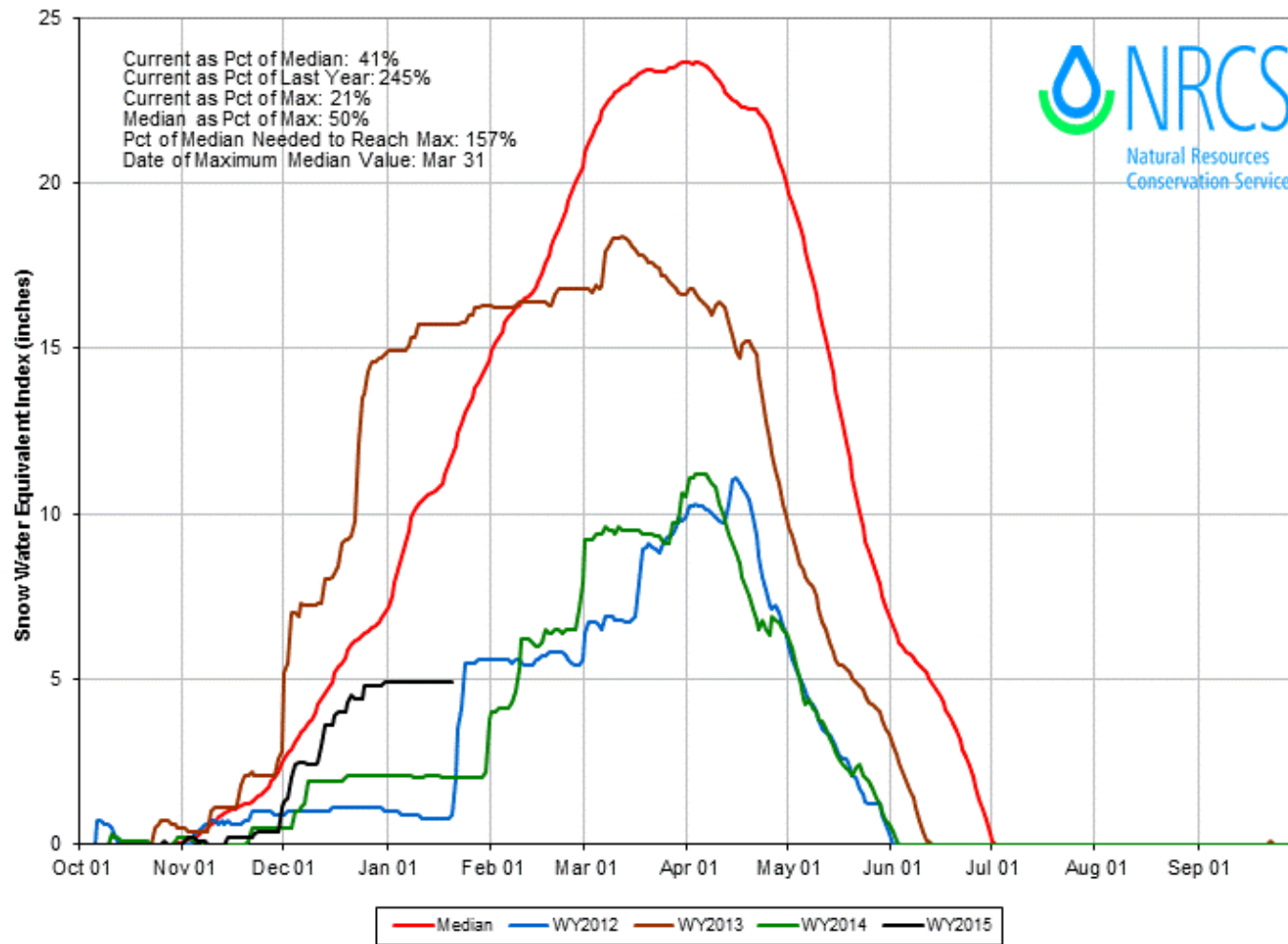
Walker Basin Reservoir Storage January 2015



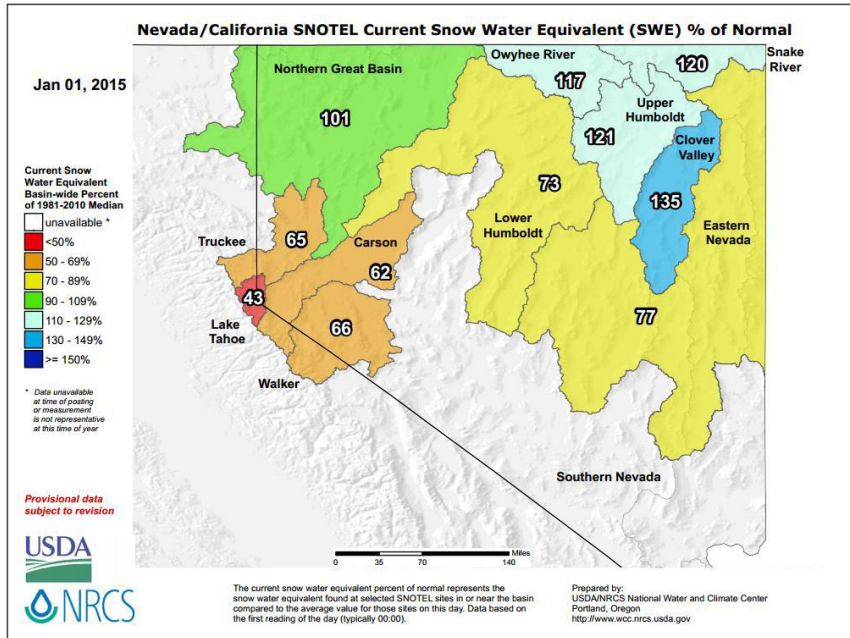
Walker River Basin

Snowpack Snow Water Equivalent

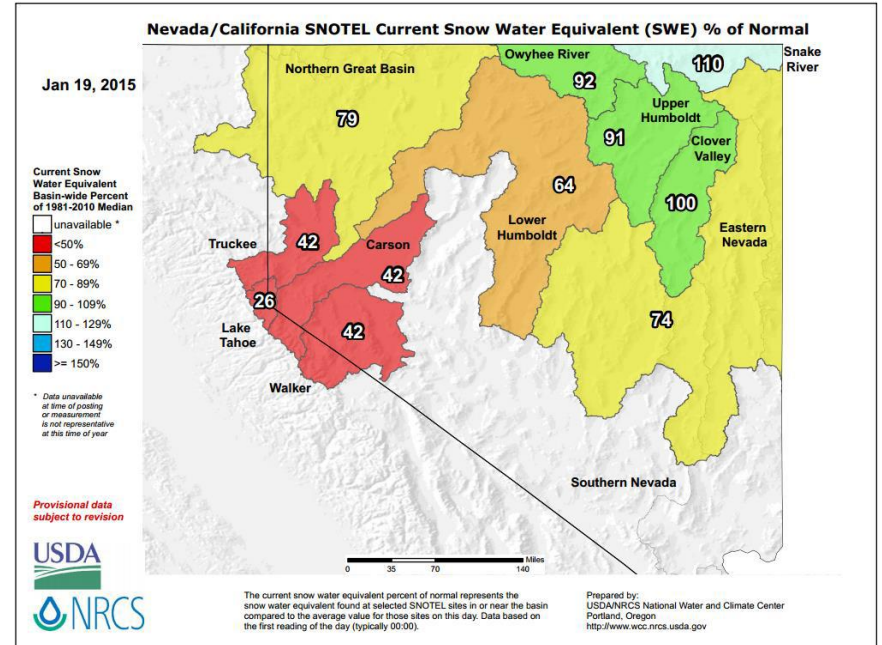
WALKER RIVER Time Series Snowpack Summary
Based on Provisional SNOTEL data as of Jan 20, 2015



Snow Water Equivalent



January 1



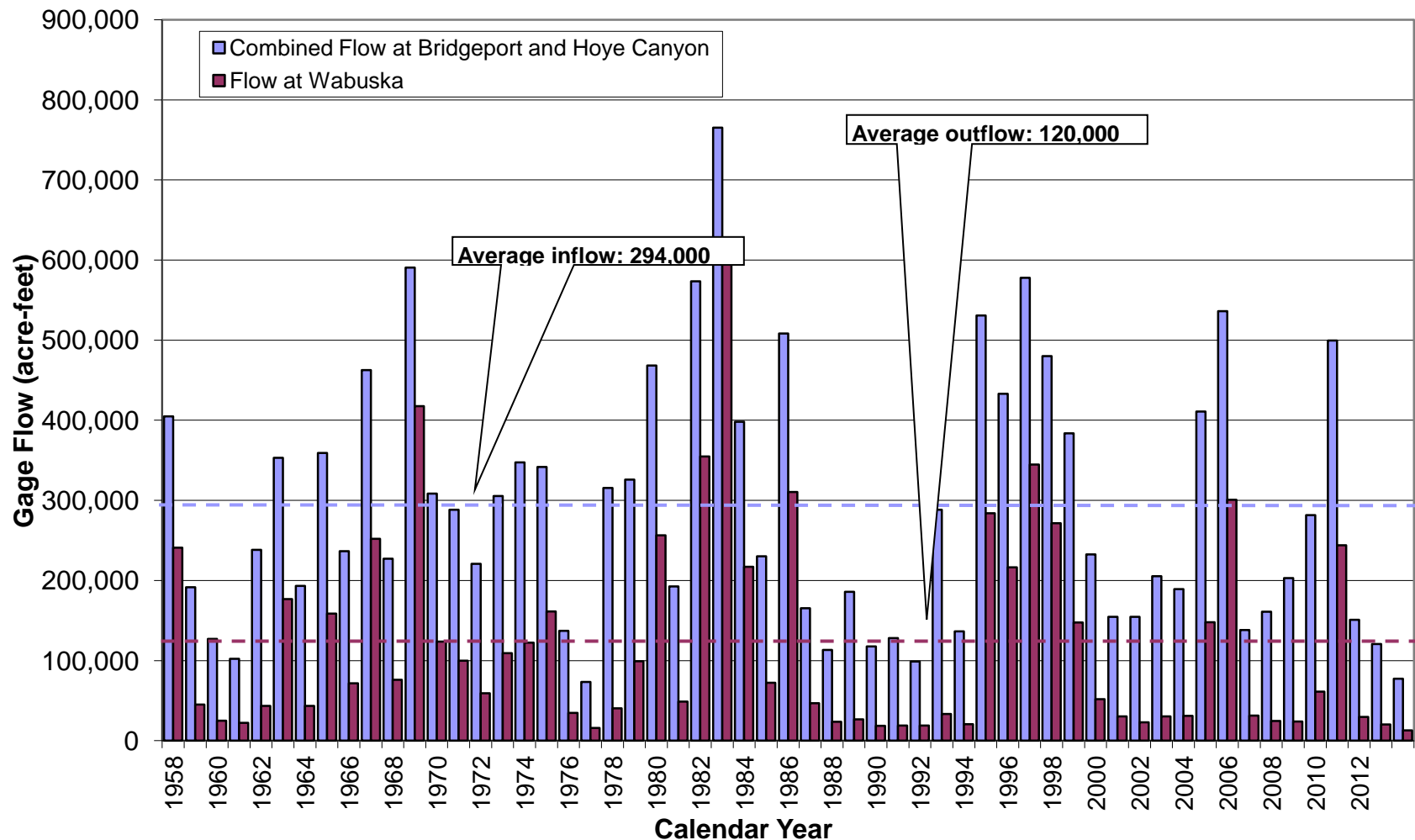
January 19

Current Stream Flows

USGS (<http://waterdata.usgs.gov/nv/nwis/current/?type=flow>)

| | Long Term Mean (CFS) | Current Discharge 1/21/2015 (CFS) |
|--|-------------------------|--------------------------------------|
| USGS East Walker Near Bridgeport (10293050) | 45 | 9.3 |
| USGS West Walker Near Coleville (10296500) | 73 | Ice |
| USGS West Walker at Hoyo Bridge (10297500) | 53 | 15 |
| USGS Walker River Near Wabuska (10301500) | 114 | Ice |

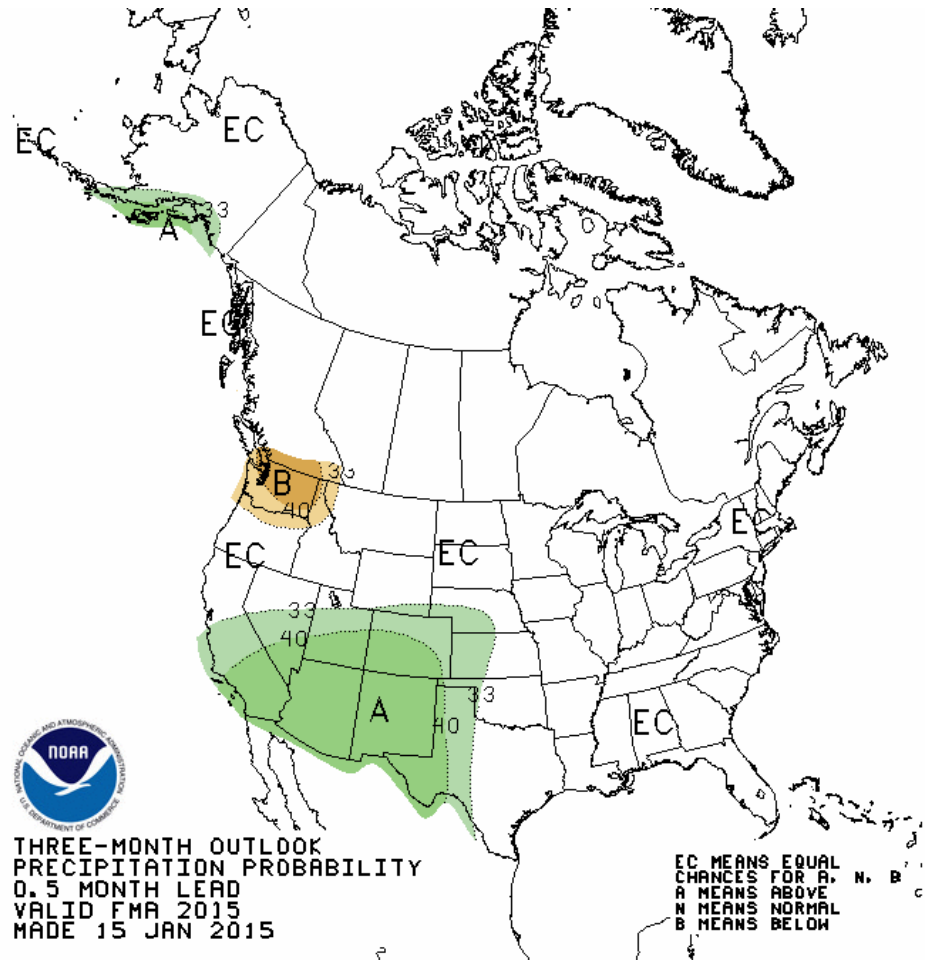
Walker River Flows in Smith, Mason and East Walker Basins



Spring 2015 (Feb-Apr) Precipitation Outlook

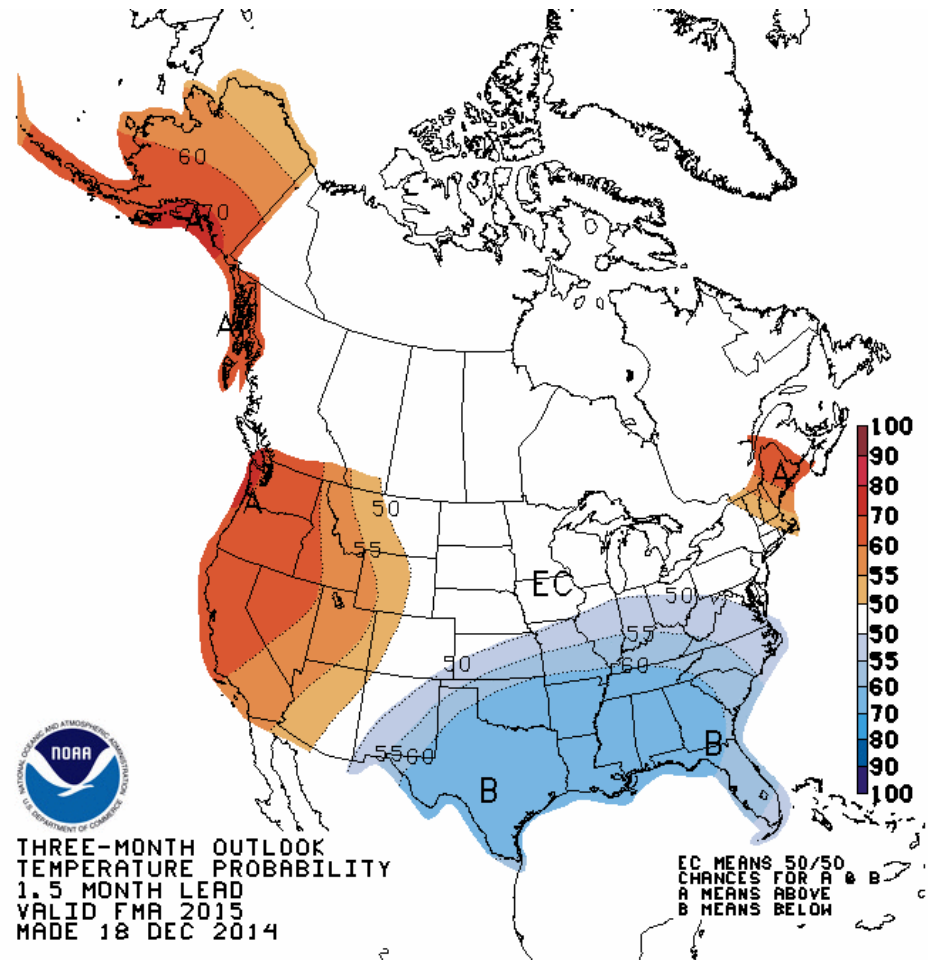


Official outlook –
normal precipitation
overall; medium
confidence



Spring 2015 (Feb-Apr) Temperature Outlook

Temperature – favors continued above normal with medium to high confidence (higher than average snow levels).



National Weather Service Briefing

January 20, 2015

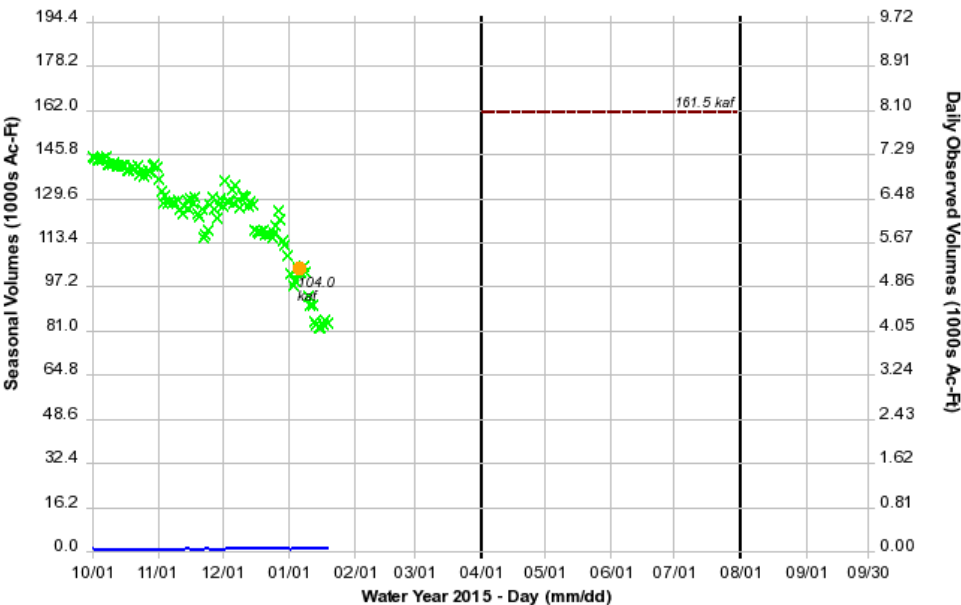
WEST WALKER RIVER - HWY 395 BELOW LITTLE WALKER (WWBC1)

Latitude: 38.38° N Longitude: 119.45° W Elevation: 6591 Feet
Location: Mono County in California River Group: Eastern Sierra

Issuance Time: Jan 19 2015 at 10:23 AM PST

2015 Seasonal Trend Plot (Year View)

Tabular View | Select a Different Water Year: 2015 ▼



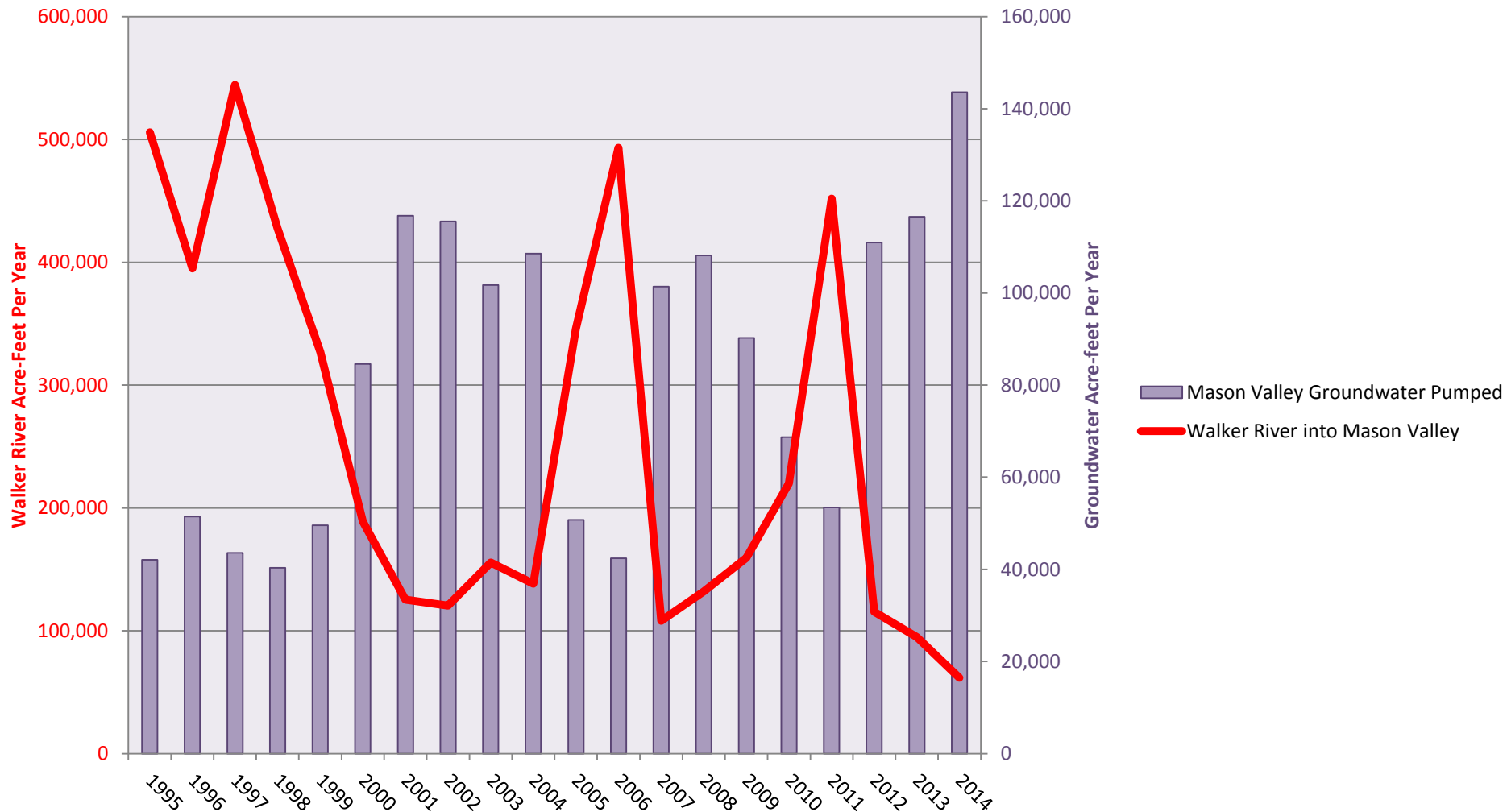
The forecast trend is very negative. All river points in the eastern Sierra and the Nevada Basin and Range, are forecasted to have below to well below average volume flows from April through July .9

Created: 01/19/2015 at 10:23 AM PST (ID = WWBC1)
NOAA / NWS / California Nevada River Forecast Center



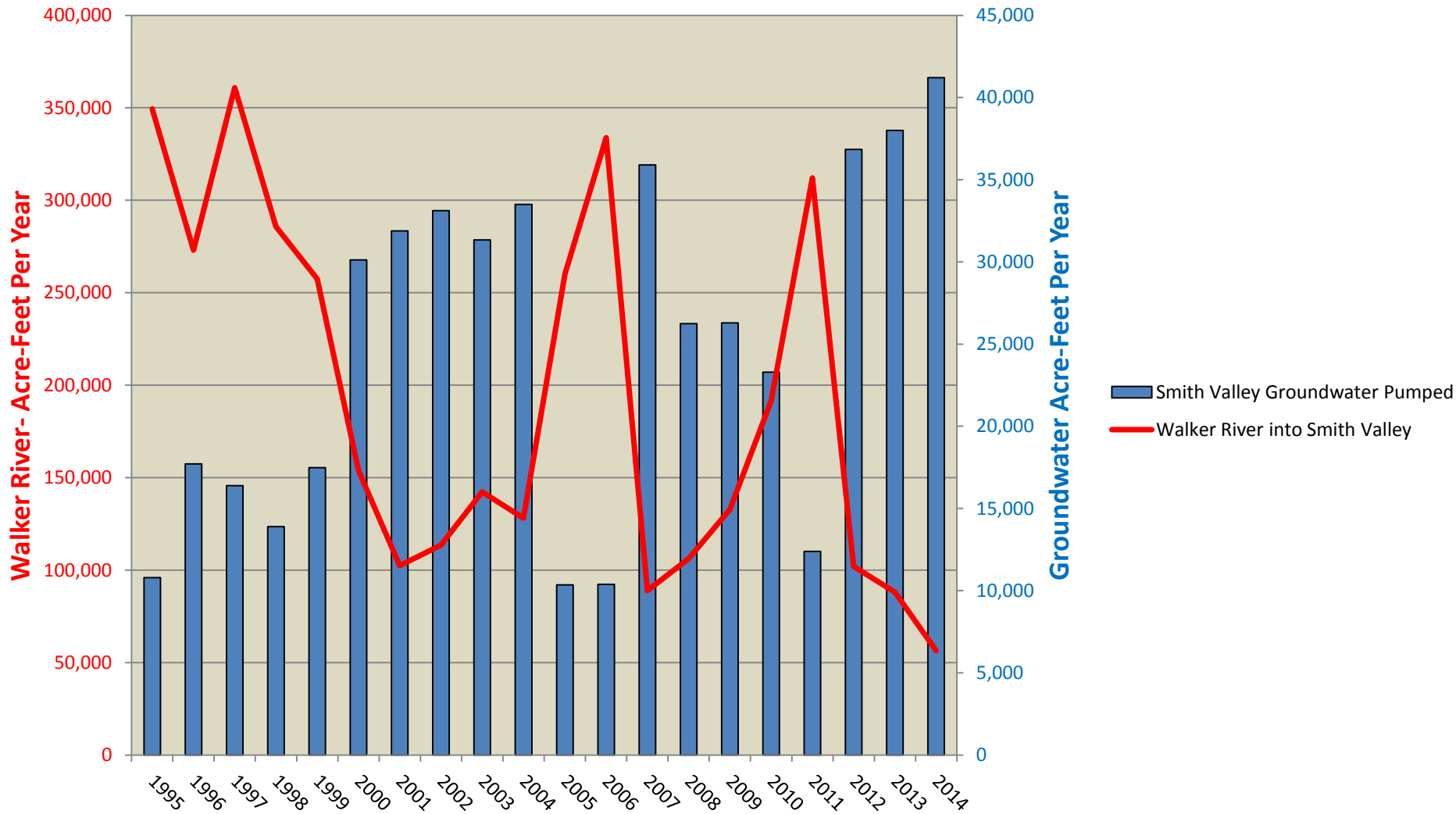
Mason Valley Groundwater & Surface Water History

Less Surface Water Available = More Groundwater Pumped

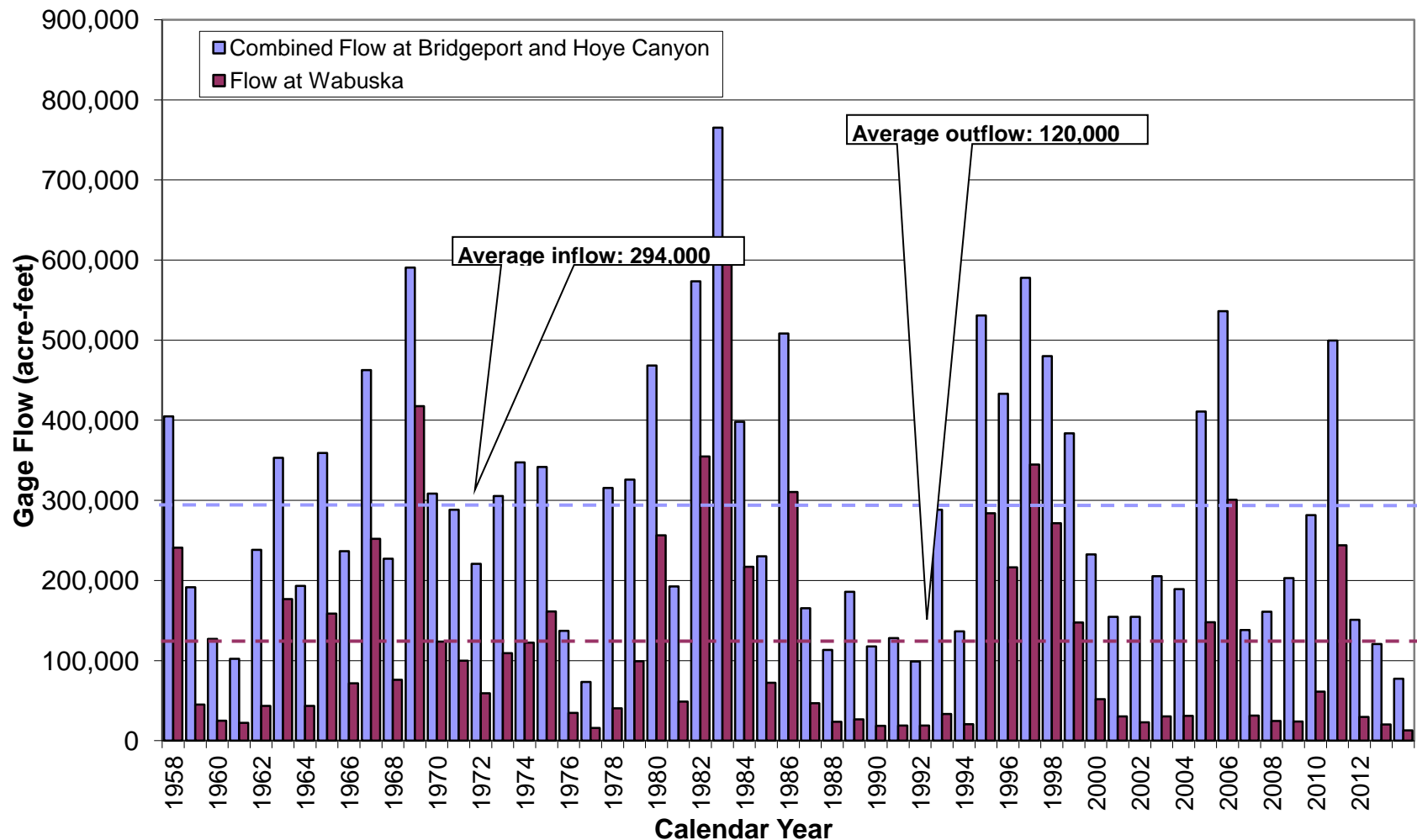


Smith Valley Groundwater & Surface Water History

Less Surface Water Available = More Groundwater Pumped



Walker River Flows in Smith, Mason and East Walker Basins



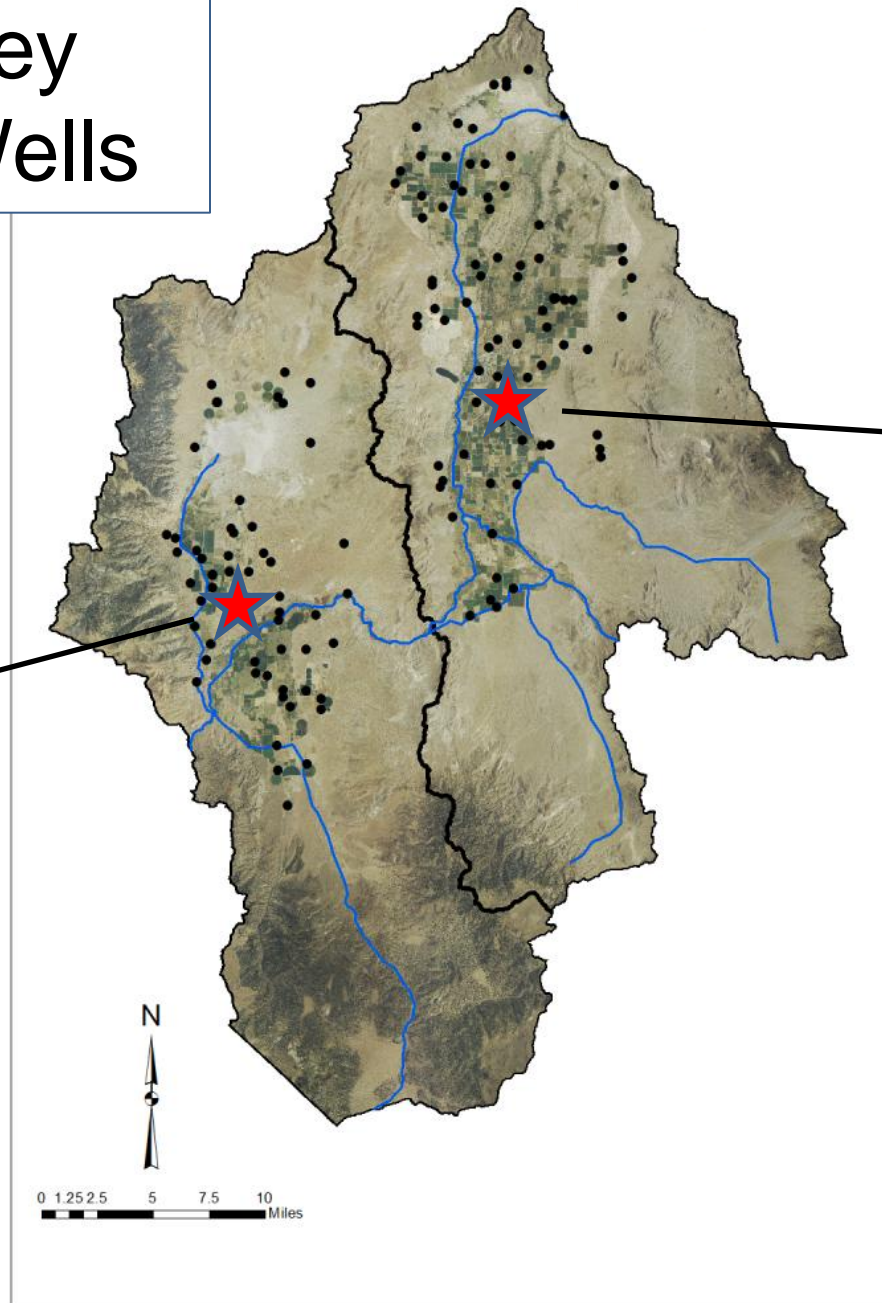
Smith Valley and Mason Valley Monitoring Wells

NDWR
currently monitors
groundwater
levels at 32 sites
in Smith Valley

Representative
Smith Valley
Hydrograph

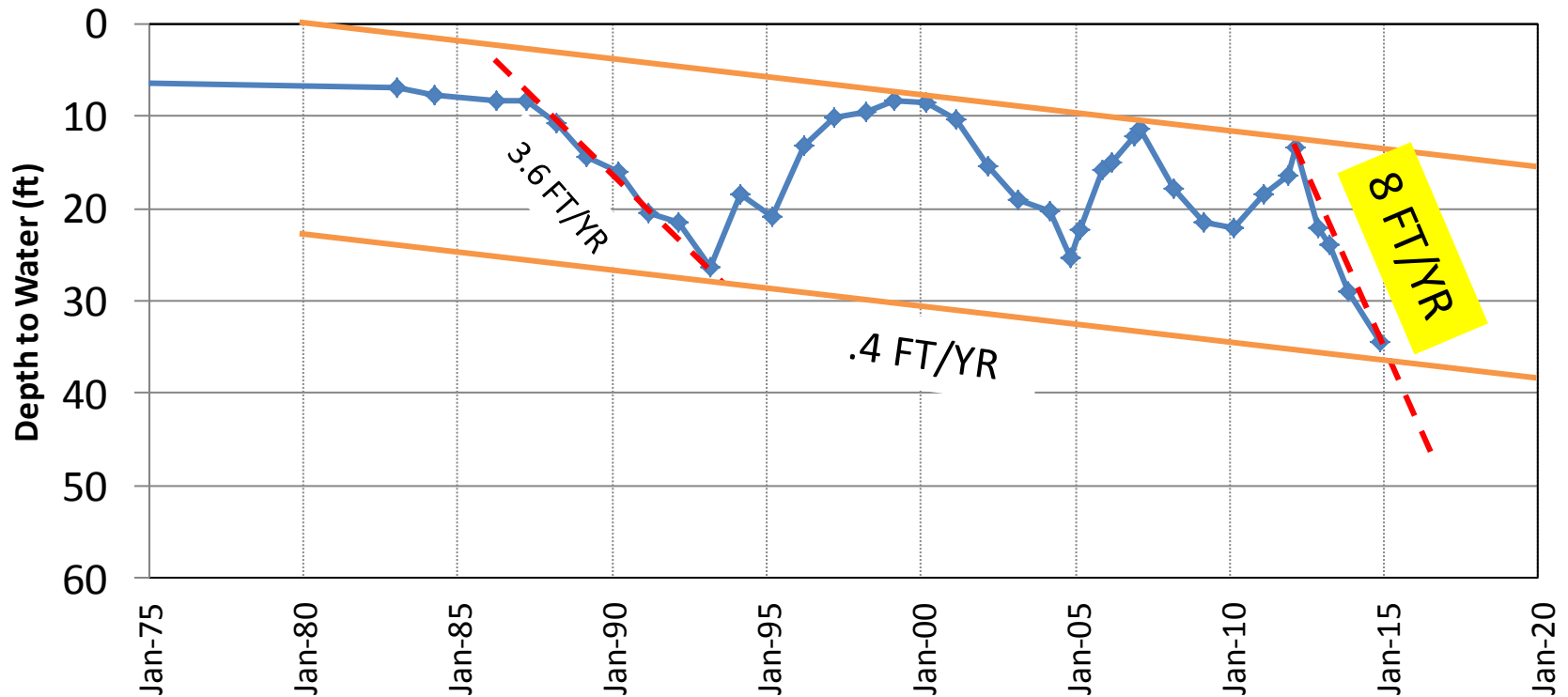
Representative
Mason Valley
Hydrograph

NDWR
currently
monitors
groundwater
levels at 60
sites in Mason
Valley



Representative Mason Valley Hydrograph


108 N13 E25 23DDDC1: SEYDEN




Mason Valley Water Level Decline from Nov 2011 to Nov 2014

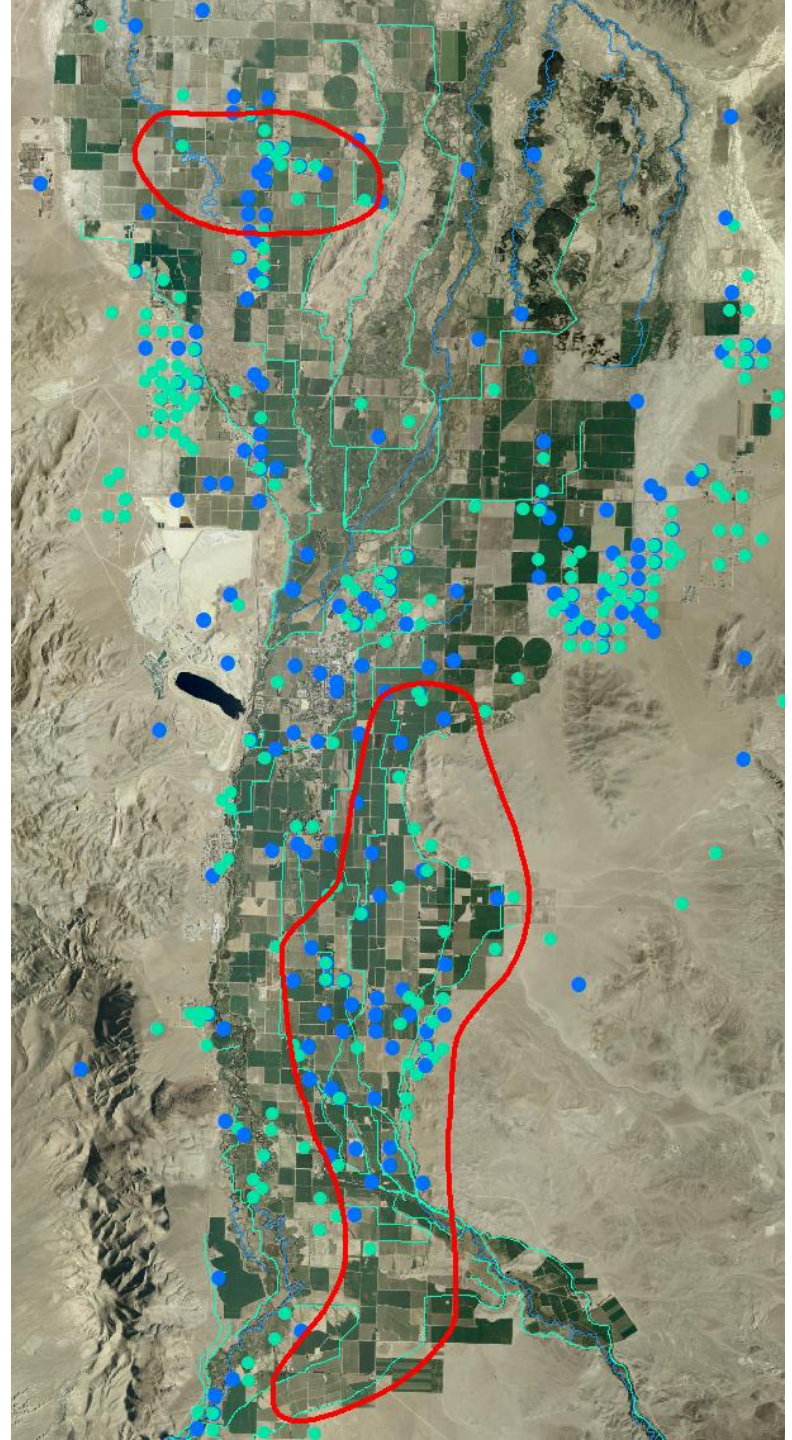
 20 - 30 ft

Well Depth

 ≤ 100 ft

 100 – 150 ft

In Mason Valley there are 279 wells that are less than or equal to 100 feet of these 139 are domestic



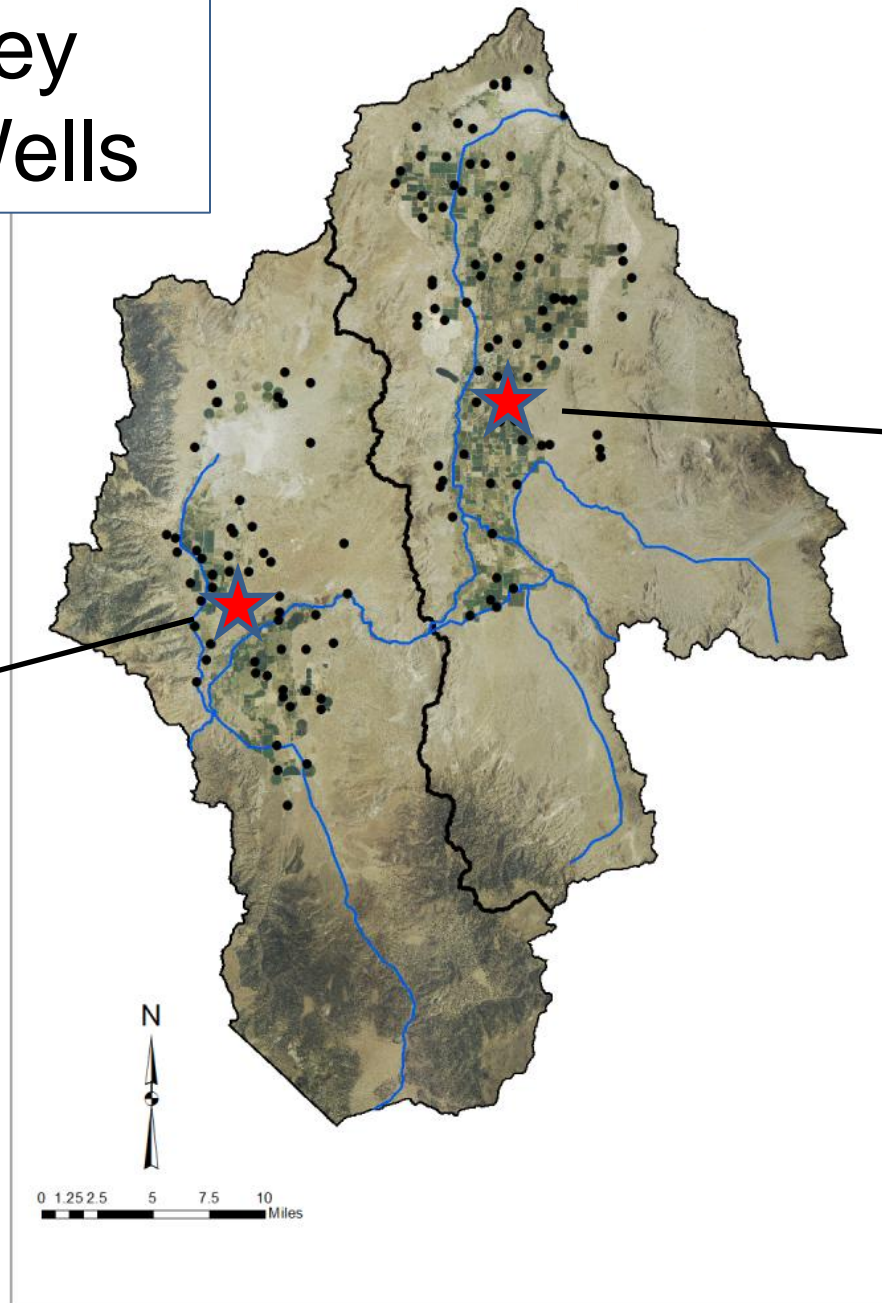
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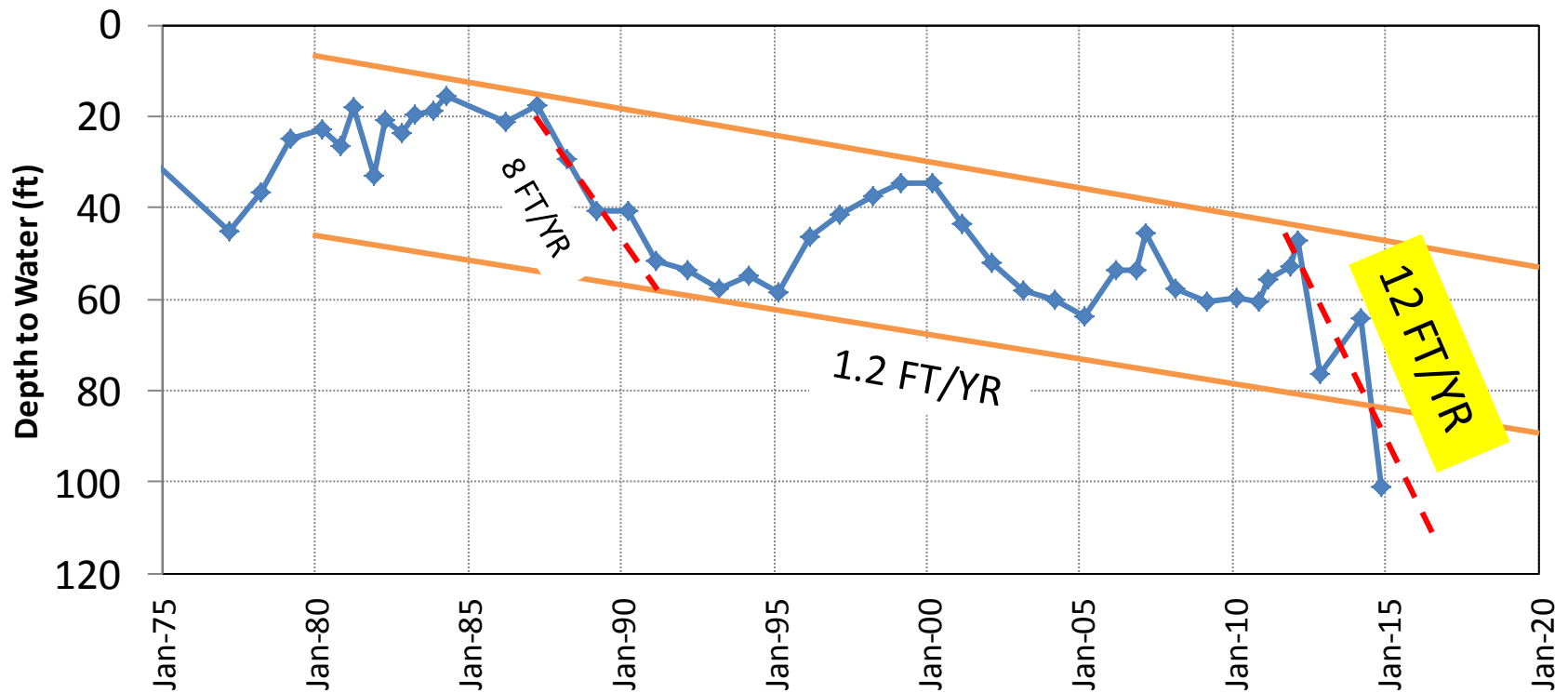
Representative
Mason Valley
Hydrograph

NDWR
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sites in Mason
Valley



Representative Smith Valley Hydrograph

107 N11 E23 12CBBB1: WALKER

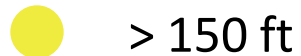
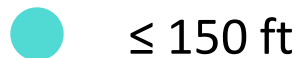


Smith Valley

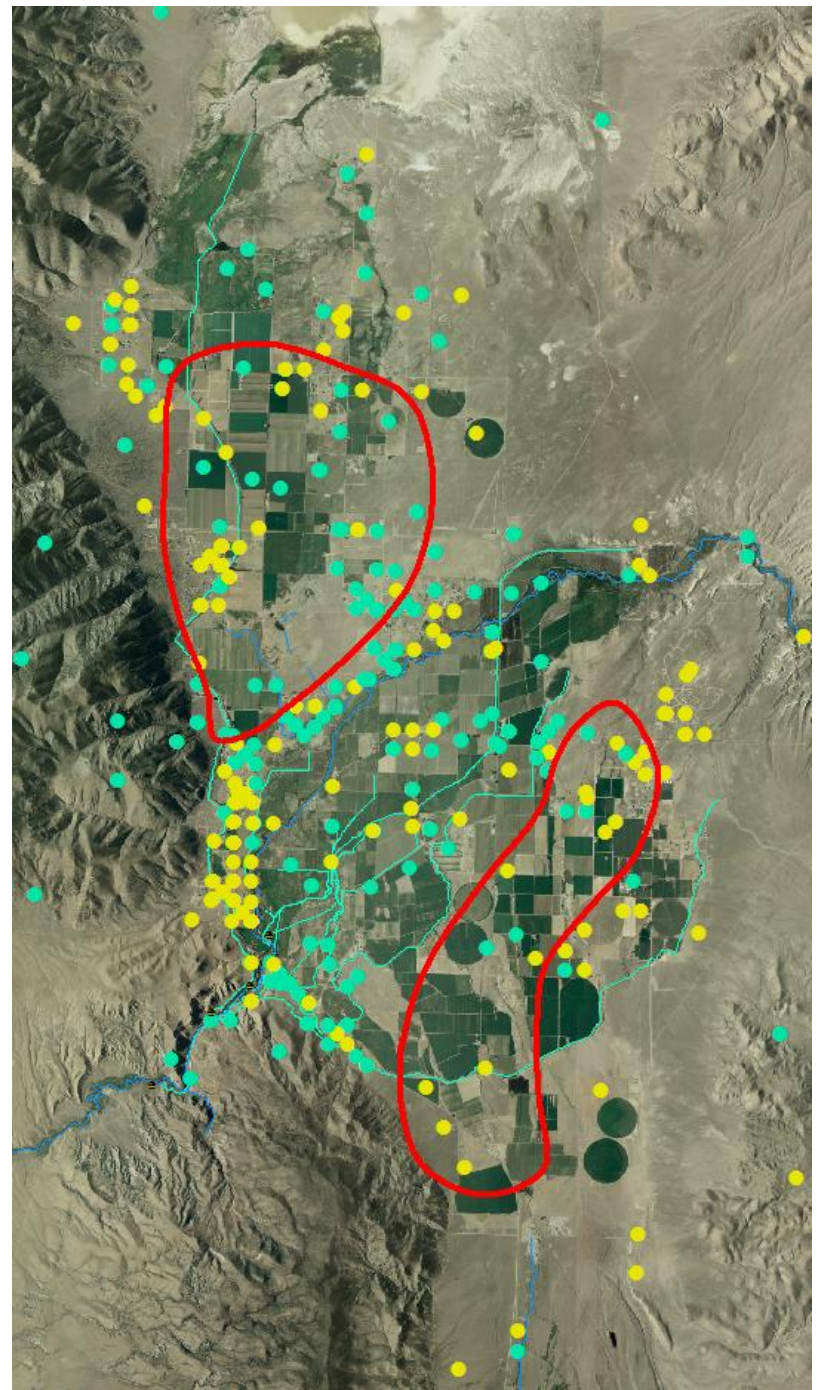
Water Level Decline from Nov 2011 to Nov 2014



Well Depth



In Smith Valley there are 342 wells that
are less than or equal to 150 feet
Of these 269 are domestic



Recap

- Since 2000, only three above-average surface water years.
- Appear to be entering the fourth consecutive exceptionally dry year.
- Unprecedented water level declines basin-wide.
- Hundreds of shallow wells already experiencing significant water level declines in just the last three years – some failures already reported.
- Strong likelihood for basin-wide failure of domestic and other shallow wells without any action.


Immediate action required!

State Engineer Actions for 2015

Order 50% curtailment of all
supplemental irrigation
rights in Smith and Mason
Valleys.

State Engineer Actions for 2015

- Our office will make available online, a list of all supplemental rights in each basin.
- Our office will tag each irrigation well notifying the permittee the quantity of water available to pump.

| THIS DIVERSION IS UNDER THE REGULATION OF THE NEVADA STATE ENGINEER | |
|--|---|
| Permit Nos. |  http://water.nv.gov |
| Percent Reduction % | |
| Total Acre-Feet Not To Exceed: (Reduction already calculated) | |
| Beginning Meter Reading: | Date: |
| Ending Meter Reading : (Do Not Exceed) | Site_Name: |
| <i>Questions concerning this tag please call (775) 684-2800</i> | |

State Engineer Actions for 2015

- Commit additional staff resources towards field monitoring efforts.
- Expedite applications.
- Work with water users to explore all reasonable alternatives to minimize the impacts of the curtailment order; **BUT**
- Violations of the Curtailment Order will be subject to fines and penalties. Our goal is compliance, **NOT** fines and penalties.

Objectives

- Protect existing water rights and domestic wells.
- Protect the physical integrity of the aquifer.
- Protect long-term water supply.

Questions

